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ABSTRACT

Policy analysis is the process by which systematically collected information is provided to decision makers. As an integral part of a specific policy setting process and a comprehensive planned change process, such analyses can provide school administrators with much needed information to guide their decisions concerning district-wide microcomputer use. Policy analysis steps include: (1) PIN (problem-issue-need) clarification; (2) question development; (3) data collection, analysis, and synthesis; and (4) identification of alternative policy options and their implications. One way to gain information about potential PINs is to have knowledgeable people report on the conditions in the district regarding uses of computers for instruction (e.g., problem solving, computer literacy, and computer science) and for local and district-wide administrative and support services. Individual and overlapping PINs can become part of a three-point summary focusing on things that are not now PINs, those things that are PINs, and those things that are unknown. Questions can then be formulated to focus the policy analysis, for example, questions regarding curriculum impact, courseware development and evaluation, and teacher training. The specific procedures used will depend on the nature of the questions addressed and the resources available. While the formation of policy options and their implications should fall to the district superintendent and key staff, the details of implementation should be left to those who will be most directly involved. Finally, policy analysis can form the basis of a systematic problem-solving approach to the formulation of policy options and subsequent planning for implementation. A list of references is provided. (JB)

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EVALUATION GUIDES

Guide Number 19

EVALUATION POLICY FOR DISTRICT COMPUTER USE

Peter J. Gray

The use of policy analysis is discussed, including:

- What Is Policy?
- The Role of Policy Analysis and Its Essential Steps
- Planning for Implementation

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WHAT IS POLICY?

Districts typically have policies on many topics, such as energy conservation, student discipline, and field trips, but none on microcomputer use. Because of pressure for computer use and its potential widespread impact on a district, clearly it should be considered in the context of policy setting.

Hall and Hord (n.d.), in describing the levels and sublevels of successful interventions, define policy as: ". . . a rule or guideline that reflects or directs the procedures, decisions and actions of an organization and the individuals within it." (Figure 1, p. 1)

Wolfe states, "[p]olicy making is not a logical, intellectual, problem-solving or decision-making process. Policy making is a social process" (p. 44). Others have called it a political process. But, "[t]he process, fortunately, can be managed" (The Educational Policies Service, 1975, p. 9). Figure 1 shows the steps which can be used to manage the policy making process (based on Wolfe, 1982, and The Educational Policies Services, 1975).

These steps represent more of a cycle than a linear, one-time process, since as a result of the evaluation of policy impact, a new problem-issue-need (PIN) may emerge; at any rate, the need for revisions will become evident over time. Policy analysis is the process by which systematically collected information is provided to decision makers, step two of the policy setting process shown in Figure 1.

Figure 1
Steps in the Policy Making Process

1. A PIN (problem-issue-need) emerges.
2. A policy analysis is conducted.
3. The board discusses the elements of each option.
4. A draft policy covering the option(s) chosen is presented to the board for approval or revision.
5. Public review of the policy is scheduled.
6. A decision is made to adopt or revise the draft policy.
7. The administration is charged with (1) policy implementation and (2) the evaluation of policy impact.

THE ROLE OF POLICY ANALYSIS

Policy analysis is a powerful tool for providing information for decision-making. As an integral part of a specific policy setting process and a comprehensive planned change process, it can provide administrators with much needed information.

Microcomputer use is a striking example of an educational change that has both widespread and deeply felt importance. To date, microcomputer use in schools has been a grassroots movement, with individual teachers and principals, along with parents, acting as the driving forces behind the movement. Recently, however, it has been elevated to state and national importance. For example, it is a common thread running through the recent national critiques of education (e.g., A Nation At Risk: The Report of the National Commission on Excellence in Education). And, together with the subject areas of science and mathematics, computer technology is part of student and teacher-related mandates in virtually every state in the nation (Education Commission of the States, 1983).

To exert reasonable control over the tremendous resources involved in district-wide microcomputer use and yet to not stifle the initiative and enthusiasm of the individuals who have brought the computer revolution to its present point, school district administrators need a source of information to guide future decision-making. Policy analysis can be that source.

Policy analysis is intended to facilitate "the choice of the best policy among a set of alternatives with the aid of reason and evidence" (McRae, 1979, p. 17). That is, it combines "practical experience and common sense" with "formal, analytical techniques" (House, 1982, p. 44). Therefore, policy analysis is defined as a generic research activity within a practical context intended to guide the systematic identification of reasonable alternative policy options and their implications relative to particular problems, issues, needs. The steps of policy analysis are similar to those one would go through in any research project. They are shown in Figure 2.

What makes them special here is the focus on problems, issues, and needs (PINs) for the purpose of formulating policy options. As Quade (1977) notes, "Policy analysis seeks to improve decision-making in a particular situation" (p. 22).

Figure 2
Policy Analysis Steps

1. PIN clarification
2. Question development
3. Data collection, analysis and synthesis
4. Identification of alternative policy options and their implications

One way to gain information about potential PINs is to have knowledgeable people report on (i.e., clarify) the conditions in the district regarding each cell in the computer use/PIN cluster matrix in Figure 3 and the topics in Figures 4 and 5. This will provide decision makers with information on the conditions of instructional and administration/support services computer use in terms of people, organizational, and technological PINs. Of course, there will be many cases where a problem, issue, and need (PIN) in one cell will be connected to PINs in other cells. Individual and overlapping PINs can become part of a three-point summary focusing on (1) things that <u>are not now</u> PINs, (2) those things that <u>are</u> PINs, and (3) those things that are <u>unknown</u>.

Figure 3
Computer Use/PIN Cluster Matrix

PIN Clusters / Computer Uses	People	Organizational	Technological
Instructional CAI Problem solving Computer literacy/ Computer science			
Administrative and support services Local District-wide			

Figure 4
PIN Cluster Topics

People (individual and informal group PINs)
- affective, personal feelings of adequacy/inadequacy
- knowledge and skills regarding the operation of computers
- social, interpersonal relationships related to computer use

Organizational (management and coordination PINs)
- centralization vs. decentralization of control
- equity in access, use, and outcomes regarding computer use
- planning/timelines
- funding and resource allocation

Technological (computer use specific PINs)
- selection, maintenance, service, support
- equipment: central processing units, peripherals
- software: locally programmed, generic, task specific
- facilities: space, furniture, lighting, power, security

Figure 5
Computer Use Areas and Topics

Instructional Use

- Computer-assisted instruction using software for drill and practice, tutorial, and simulation
- Problem solving in content areas using software for word processing, data base management, spreadsheet applications, graphics, and programming
- Computer literacy/computer science

Administrative and Support Service Use

- Local use (confined to individual buildings or departments)
- District-wide use (assumes the sharing of data across site and potentially with external agencies)
  - Office applications: report writing and other word processing, scheduling, filing and record keeping, daily/period attendance, grades and process reporting
  - Special support uses: print shop ordering, curriculum materials center booking, personnel grievance data, teacher/substitute information, financial forecasting, maintenance scheduling, transportation routing, on-line cash registers, enrollment projections

Question Development

By closely examining those items that are PINs, or that are unknown, a set of questions can be formulated to focus the policy analysis. For example, typically of high concern to districts are questions regarding curriculum impact, courseware development and evaluation, teacher training, and equity (Rockman, White and Rampy, 1983).

Data Collection, Analysis, and Synthesis

The actual task of designing and implementing data collection, analysis, and synthesis procedures will most likely be delegated to school district personnel (e.g., a district evaluation unit) or to an outside consultant. The specific procedures used will depend on the nature of the question(s) addressed and the resources available.

Identification of Alternative Policy Options and Their Implications

Because policy setting is a social process, it is important to maintain open communication all during the policy analysis process, so that people know what is happening and why. This will assure them that their points of view are being considered.

PLANNING FOR IMPLEMENTATION

In discussing the essential characteristics of the adoption phase of planned change, Fullan (1982) states:

> It is the quality of the planning process which is essential: the degree to which a problem-solving approach at the adoption stage is combined with planning ahead for implementation . . . The quality of the adoption process already sets the stage for subsequent success or failure (p. 64).

Detailed implementation planning is not the role of policy analysis. However, each adoption alternative should have related to it a set of administrative rules and procedures containing sufficient detail to guide subsequent implementation. These should include general information on logistical and scheduling activities, staffing, funding level, roles and relationships, facilities, materials and other requirements.

While the formation of policy options and their implications should fall to the district suprintendent and key staff, the details of implementation should be left to those who will be

most directly involved. For as Fullan (1982) notes, "More important for change in practice, however, is implementation-level participation in which decisions are made about what does work and what does not" (p. 65).

In summary, policy analysis is a vehicle through which district administrators can gain knowledge for decision-making relative to an innovation like computer use. Through policy analysis they can come to understand the meaning of computer use in terms of the problems-issues-needs surrounding it in their own district. As a result, they can be in a position to actively set the direction and content of such a change. Policy analysis, therefore, can form the basis of a systematic problem-solving approach to the formulation of policy options and subsequent planning for implementation.

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